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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/529,916

04/01/2005

Yoshiro Chikaki

KKH-0037

5280

7590
Rader Fishman & Grauer
Suite 501
1233 20th Street N W
Washington, DC 20036

01/21/2009

EXAMINER

GOFF II, JOHN L

ART UNIT

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1791

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/529,916	Applicant(s) CHIKAKI ET AL.	
	Examiner John L. Goff	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/26/08 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 1, 3, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP10-95089 (See also the machine translation and abstract) or Chikaki et al. (U.S. Patent 6,149,757) in view of Stuhldreher (U.S. Patent 4,943,609) or Lugmair et al. (U.S. Patent Application Publication 2002/0014546).

JP10-95089 and Chikaki each disclose a laminating apparatus comprising an upper chamber (10 of JP10-95089 and 2 of Chikaki) and a lower chamber (12 of JP10-95089 and 3 of Chikaki) partitioned by a diaphragm (30 of JP10-95089 and 4 of Chikaki), a heater board (35 of JP10-95089 and 10 of Chikaki) provided in the lower chamber, and a holding means (36 of JP10-95089 and 13 of Chikaki). JP10-95089 and Chikaki do not specifically teach the diaphragm constitutes a single layer of butyl rubber. However, JP10-95089 teaches the

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diaphragm is a single layer of heat resistant rubber such as VITON (fluorocarbon rubber), etc. (Paragraph 0016), and Chikaki teaches the diaphragm is a single layer of a heat resistant rubber such as fluorine containing rubber (Column 4, lines 28-30). Thus, JP10-95089 and Chikaki are not limited to any particular material for the diaphragm other than the material is a heat resistant rubber. Stuhldreher disclose a heat resistant rubber having good physical properties for use as a curing bladder in a press which rubber comprises butyl rubber, it being noted a curing bladder is considered analogous to a diaphragm (Column 1, lines 13-29 and 36-41 and Column 3, line 26 to Column 4, line 7). Lugmair is further cited as optionally demonstrating a press including a diaphragm which diaphragm is made either of butyl rubber or VITON (Paragraph 0088). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the single layer of heat resistant rubber for the diaphragm in either JP10-95089 or Chikaki the butyl rubber shown by Stuhldreher forming a diaphragm having good physical properties. Alternatively, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the single layer of heat resistant rubber for the diaphragm in either JP10-95089 or Chikaki butyl rubber a known functional equivalent in forming a diaphragm to fluorine containing rubber as shown by Lugmair.

Regarding the limitations of “for laminating a solar battery panel” and “wherein the solar battery panel has a structure with strings sandwiched with a filler between a reinforcing material and a cover glass, and wherein the filler is ethylene-vinyl acetate (EVA) resin”, these limitations are directed to the material or article worked upon by the claimed apparatus. Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim (MPEP 2115). However, it is noted both JP10-

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95089 and Chikaki are capable of use with the material claimed, and JP10-95089 in particular describes using the apparatus on the same solar battery panel claimed.

Regarding the limitations of “said diaphragm being capable of freely expanding for pressurizing the object to be laminated which is mounted on said heater board”, “for holding the object to be laminated which is mounted on said heater board in a state that the object to be laminated is separated upward from an upper surface of said heater board while the object to be laminated is carried in”, and “configured to hold the object to be laminated in a state that the object to be laminated is separated upward from the upper surface of said heater board also while the object to be laminated is carried out”, these limitations are directed to the manner of operating the claimed apparatus. A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim (MPEP 2114). The apparatus taught by both JP 10-95089 and Chikaki include all of the structural limitations of the claim which structure is capable of operating in the manner claimed.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP10-95089 or Chikaki and Stuhldreher or Lugmair as applied to claims 1, 3, and 4 above, and further in view of Custer et al. (U.S. Patent 3,857,775).

JP10-95089 or Chikaki and Stuhldreher or Lugmair as applied above teach all of the limitations in claim 2 except for a specific teaching of the butyl rubber comprising magnesium oxide. Stuhldreher teaches the heat resistant diaphragm constituted of a single layer of butyl rubber comprises 100 to 0 parts by weight of halogenated butyl, 0 to 100 parts by weight of

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regular butyl, 5 to 100 parts by weight of carbon black, 0 to 20 parts by weight of paraffin oil, 1 to 5 parts by weight of zinc oxide, 1 to 20 parts by weight of resin vulcanizing agent, and 0 to 10 parts by weight of processing aid such as stearic acid (Example 1 of Stuhldreher). Stuhldreher is silent as to the butyl rubber including 1 to 5 parts by weight of magnesium oxide. It was known in the art that heat resistant diaphragms formed of butyl rubber comprising 100 to 0 parts by weight of halogenated butyl, 0 to 100 parts by weight of regular butyl, 5 to 100 parts by weight of carbon black, 0 to 20 parts by weight of paraffin oil, 1 to 5 parts by weight of zinc oxide, 1 to 20 parts by weight of resin vulcanizing agent, and 0 to 10 parts by weight of processing aid such as stearic acid include the zinc oxide, magnesium oxide, and stearic acid as activators used to enhance the cure as shown by Custer (Column 2, lines 29-42 and Column 8, lines 14-28 and Example 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include in the butyl rubber composition taught by JP10-95089 or Chikaki as modified by Stuhldreher 1 to 5 parts of magnesium oxide a known activator used to enhance the cure as shown by Custer. Alternatively, it would have been obvious to one of ordinary skill in the art at the time the invention was made use as the butyl rubber composition taught by JP10-95089 or Chikaki as modified by Lugmair the butyl rubber composition shown by Custer for forming an improved heat-resistant diaphragm.

Response to Arguments

5. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

The new limitations are fully addressed above.

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Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **(571)272-1216**. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John L. Goff/
Primary Examiner, Art Unit 1791